Claim Amendments

Listing of Claims:

1.   (Currently amended) A method for ~~retail~~item check-out in a retail establishment, comprising the steps of:

downloading price and item data into a price look-up table in a portable data reading unit;

providing the portable data reading unit to a customer;

allowing the customer to traverse the retail establishment with the portable data reading unit and to select items for purchase;

updating the price and item data into the price look-up table via a wireless link while the customer traverses the retail establishment;

the customer selecting a plurality of desired items, reading an identifier on each item with the portable data reading unit, and taking the items to a self-checkout station;

establishing a communication link between (a) ~~a~~the self-checkout station incorporating a customer-operated automated payment-accepting subsystem and (b) a data storage unit in which a plurality of data records are stored, each of the plurality of data records corresponding to a respective one of a plurality of identifiers that was read by a portable data reading unit before the communication link was established;

inputting the plurality of data records from the data storage unit via the communication link established in the establishing step;

determining a price total for a plurality of items corresponding to the plurality of identifiers based on the plurality of data records inputted in the inputting step; and

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accepting payment for the plurality of items based on the price total determined in the determining step,

wherein the step of accepting payment is performed using the customer-operated automated payment-accepting subsystem.

2.   (Currently amended)   The method of claim 1, wherein the data storage unit is contained in the portable data reading unit.

3.   (Original)   The method of claim 1, wherein the data storage unit receives data from the portable data reading unit via an RF interface.

4.   (Currently amended)   ~~The~~ A method ~~of claim 1~~for retail check-out comprising the steps of:

establishing a communication link between (a) a self-checkout station incorporating a customer-operated automated payment-accepting subsystem and (b) a data storage unit in which a plurality of data records are stored, each of the plurality of data records corresponding to a respective one of a plurality of identifiers that was read by a portable data reading unit before the communication link was established;

inputting the plurality of data records from the data storage unit via the communication link established in the establishing step;

determining a price total for a plurality of items corresponding to the plurality of identifiers based on the plurality of data records inputted in the inputting step; and

accepting payment for the plurality of items based on the price total determined in the determining step,

wherein the step of accepting payment is performed using the customer-operated automated payment-accepting subsystem,

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wherein the step of determining the price total comprises the steps of:

outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and

inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

5.   (Previously presented) The method of claim 1, wherein the portable data reading unit comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

6.   (Original) The method of claim 1, wherein the portable data reading unit comprises a radio frequency identification tag reader.

7.   (Original) The method of claim 1, wherein the automated payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

8.   (Currently amended) A method of retail shopping, comprising the steps of:

obtaining a portable reading unit;

selecting a set of desired items;

identifying each of the desired items using the portable reading unit during the selecting step and placing the item in a shopping cart;

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<u>confirming via a mechanism associated with the cart that</u>
<u>the item placed in the cart corresponds to the item identified;</u>

linking, after completion of the selecting and identifying steps, the portable reading unit to a self-checkout station having a customer-operated automated payment-accepting subsystem;

waiting for a transfer, into the self-checkout station, of data identifying the set of desired items; and

paying for the set of desired items using the customer-operated automated payment-accepting subsystem.

9.   (Original) The method of claim 8, wherein the data identifying the set of desired items is transferred into the self-checkout station from the portable reading unit.

10.   (Original) The method of claim 8, wherein the data identifying the set of desired items is transferred into the self-checkout station from a base station that communicates with the portable reading unit.

11.   (Original) The method of claim 8, wherein the desired items bear barcode symbols, and the step of identifying the desired items comprises reading the barcode symbols using the portable reading unit.

12.   (Original) The method of claim 8, wherein the automated payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

13. (Previously presented) The method of claim 8, wherein the step of linking comprises a step of placing the portable reading unit into a cradle on the self-checkout station.

14. (Original) The method of claim 8, wherein the obtaining step is performed in a first location, and the linking step is performed in a second location that is separated from the first location.

15. (Original) The method of claim 8, wherein the first location and the second location are separated by at least twenty feet.

Claim 16. (Canceled)

17. (Currently amended) The self-checkout station of claim 1621, wherein the data storage unit comprises a portable data reading unit.

18. (Previously presented) The self-checkout station of claim 17, wherein the portable data reading unit comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

19. (Original) The self-checkout station of claim 17, wherein the portable data reading unit comprises a radio frequency identification tag reader.

20. (Currently amended) The self-checkout station of claim 1621, wherein the data storage unit comprises a base station that communicates with a portable data reading unit.

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21. (Previously presented) A self-checkout station comprising:

a data input port that inputs a plurality of data records from a portable data storage unit;

a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port;

a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment; and

an interface with a second controller, wherein the first controller determines the price for the plurality of items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface,

wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller.

22. (Currently amended) The self-checkout station of claim ~~16~~21, wherein the indication generated by the automated payment-acceptor is based on at least one of an amount of cash received and a credit card authorization.

23. (Currently amended) The self-checkout station of claim ~~16~~21, further comprising a cradle, wherein a connection between the data input port and the data storage unit is established by docking a portable data reading unit in the cradle.

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24. (Currently amended) The self-checkout station of claim ~~16~~21, wherein the automated payment-acceptor comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

25. (Currently amended) A customer-operated checkout system for items bearing identifiers, the system comprising:

a portable terminal including a data reader, a memory, and a data output port; and

a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem,

wherein the portable terminal identifies selected items using the data reader, stores information about the selected items in the memory, and sends the stored information to the self-checkout station via the data output port, and

wherein the self-checkout station receives the stored information from the portable terminal via the data input port, outputs signals to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals, and accepts payment from the customer for the selected items using the payment-accepting subsystem.

26. (Previously presented) The system of claim 25, wherein the identifiers are barcodes, the data reader identifies the selected items by reading the barcodes, and the data reader comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

27. (Original) The system of claim 25, wherein the identifiers are optical characters, and the data reader identifies the selected items by reading the optical characters.

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28. (Original) The system of claim 25, wherein the identifiers are radio frequency identification tags, and the data reader identifies the selected items by reading the radio frequency identification tags.

29. (Original) The system of claim 25, further comprising a base station including a first RF data interface,

wherein the portable terminal further includes a second RF data interface, and

wherein the portable terminal requests a price from the base station, via the first and second RF interfaces, corresponding to each identifier read, and the base station provides a price to the portable terminal, via the first and second RF interfaces, in response to the price request.

30. (Original) The system of claim 25, wherein the memory of the portable terminal stores a price look-up table, and wherein total price for selected items is computed based on the price look-up table.

31. (Original) The system of claim 25, wherein the self-checkout station further includes an interface to a point-of-sale system.

32. (Original) The system of claim 25, wherein the payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

33.   (Previously presented) A customer-operated self-checkout system for items bearing identifiers, the system comprising:

a portable terminal including a data reader and a first RF interface, wherein the portable terminal identifies selected items using the data reader, and transmits information about the selected items via the first RF interface;

a base station including a second RF interface, a memory, and a data output port, wherein the base station receives the information about the selected items from the portable terminal via the second RF interface, stores the information in the memory, and outputs the information via the data output port; and

a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem, wherein the self-checkout station receives the stored information from the base station data output port via the data input port, and accepts payment from the customer for the selected items using the payment-accepting subsystem.

34.   (Previously presented) The system of claim 33, wherein the data reader identifies the selected items by reading barcodes, and the data reader comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

35.   (Original)   The system of claim 33, wherein the data reader identifies the selected items by reading optical characters, and the data reader comprises an optical character recognition reader.

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36.   (Original)   The system of claim 33, wherein the data reader identifies the selected items by reading radio frequency identification tags, and the data reader comprises a radio frequency identification tag reader.

37.   (Previously presented) The system of claim 33, wherein the base station memory stores a price look-up table, and wherein a total price for selected items is computed based on a price look-up table.

38.   (Original)   The system of claim 33, wherein the self-checkout station further includes an interface to a point-of-sale system.

39.   (Original)   The system of claim 33, wherein the payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

40.   (Previously presented)   The method of claim 4, wherein the plurality of data records includes physical characteristic data for each of the plurality of items, and further comprising the steps of:

calculating an expected aggregate physical characteristic for the plurality of items based on the plurality of data records;

automatically measuring an actual aggregate physical characteristic for the plurality of items; and

verifying that the measured aggregate substantially equates with the expected aggregate.

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41. (Previously presented) The method of claim 40 wherein the physical characteristic is weight.

42. (Previously presented) The method of claim 40 wherein the physical characteristic is volume.

43. (Currently amended) ~~The~~ A method of ~~claim 8 further~~ retail shopping, comprising the steps of ~~:~~
obtaining a portable reading unit;
selecting a set of desired items;
identifying each of the desired items using the portable reading unit during the selecting step;
linking, after completion of the selecting and identifying steps, the portable reading unit to a self-checkout station having a customer-operated automated payment-accepting subsystem;
waiting for a transfer, into the self-checkout station, of data identifying the set of desired items;
paying for the set of desired items using the customer-operated automated payment-accepting subsystem;
determining a price total at the self-checkout station by:
outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and
inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

44. (Previously presented) The method of claim 43 further comprising the steps of:

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accessing at least one of stored weight or volume data for each item in the set of desired items;

calculating at least one of the expected total weight or volume for the set of desired items based on inputted data;

automatically measuring at least one of the actual total weight or volume of the set of desired items; and

verifying that the measured total substantially approximates the expected total.

45. (Currently amended) ~~The~~A self-checkout station ~~of claim 16~~ comprising:

a data input port that inputs a plurality of data records from a portable data storage unit;

a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port; and

a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment,

wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller,

wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

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46. (Currently amended) ~~The~~A self-checkout station ~~of~~ ~~claim 21~~ comprising:

a data input port that inputs a plurality of data records from a portable data storage unit;

a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port;

a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment; and

an interface with a second controller, wherein the first controller determines the price for the plurality of items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface,

wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller,

wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

47. (Previously presented) ~~The~~A customer-operated self-checkout system ~~of claim 25~~ <u>for items bearing identifiers, the system comprising:</u>

<u>a portable terminal including a data reader, a memory, and a data output port; and</u>

<u>a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem,</u>

<u>wherein the portable terminal identifies selected items using the data reader, stores information about the selected items in the memory, and sends the stored information to the self-checkout station via the data output port,</u>

<u>wherein the self-checkout station receives the stored information from the portable terminal via the data input port and accepts payment from the customer for the selected items using the payment-accepting subsystem</u>, wherein the self-checkout station further includes:

a first controller to determine price for the selected items; and

an interface with a second controller,

wherein the first controller determines price for the selected items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface.

48. (Previously presented) The customer-operated self-checkout system of claim 47 wherein the second controller is a POS store controller.

49. (Previously presented) The customer-operated self-checkout system of claim 47, wherein the stored information includes at least one of weight or volume data for each selected item and further comprising at least one of a weight or volume

sensor to measure at least one of the actual weight or volume for the selected items, in order to compare the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

50. (New) The method of claim 1 wherein the data storage unit is located in the portable data reading unit.

51. (New) The method of claim 1 further comprising upon reading the identifier on the item, displaying item identification and price on a display screen of the portable data reading unit.

52. (New) The method of claim 1 further comprising periodically updating the price and item data into the price look-up table via the wireless link.

53. (New) The method of claim 52 wherein the price look-up table is updated when store database information is updated.

54. (New) The method of claim 8, wherein the step of confirming via a mechanism comprises sensing an increase in weight of the item and determining whether an increase in weight of contents of the cart corresponds to an expected additional weight of the item identified.